

ICF international / Laboratory Data Consultants

Environmental Services Assistance Team, Region 9 1337 South 46th Street, Building 201, Richmond, CA 94804-4698 Phone: (510) 412-2300 Fax: (510) 412-2304

MEMORANDUM

TO:

Matt Mitguard, Site Manager

Brownfields and Site Assessment Section, SFD-6-1

THROUGH:

Rose Fong, ESAT Task Order Manager (TOM)

Quality Assurance (QA) Program, MTS-3

FROM:

Doug Lindelof, Data Review Task Manager

Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041

Technical Direction Form No.: 00405122

DATE:

May 6, 2010

SUBJECT:

Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:

Tujunga Stage 2 SI

Site Account No.:

09 RP QB00

CERCLIS ID NO.:

CAN000908605

Case No.:

39591

SDG No.:

Y64M7

Laboratory:

TestAmerica Burlington (STLV)

Analysis:

Trace and Low Volatiles

Samples:

4 Soil Samples and 2 Equipment Blanks (see Case

Summary)

Collection Date:

March 26 and 30, 2010

Reviewer:

Santiago Lee, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc:

Jennie Han-Liu, CLP PO USEPA Region 1

Steve Remaley, CLP PO USEPA Region 9

CLP PO: [X] Attention

[X] Action

SAMPLING ISSUES: [X] Yes

[]No

00405122-12176/39591/Y64M7-TLV

Data Validation Report - Tier 3

Case No.: 39591 SDG No.: Y61M7

Site: Tujunga Stage 2 SI

Laboratory: TestAmerica Burlington (STLV)

Reviewer: Santiago Lee, ESAT/LDC

Date: May 6, 2010

I. CASE SUMMARY

Sample Information

Samples: Y64M7 and Y64M8; Y64N3 through Y64N6

Concentration and Matrix: Low Concentration Water and Soil

Analysis: Trace and Low Volatiles

SOW: SOM01.2

Collection Date: March 26 and 30, 2010 Sample Receipt Date: March 27 and 31, 2010

Extraction Date: Not Applicable

Analysis Date: March 29, 2010 and April 1, 2010

Field QC

Field Blanks (FB): Not provided

Equipment Blanks (EB): Y64M7 and Y64M8

Trip Blanks (TB): Not provided Background Samples (BG): Not provided

Field Duplicates (D1): Not provided

Laboratory QC

Method Blanks & Associated Samples:

VBLKJX: Y64M7 and Y64M8 VBLKJI: Storage blank VHBLK01

VBLKNS: Y64N3 through Y64N6, Y64N3RE, Y64N4RE,

Y64N6RE

VBLKNU: Storage blank VHBLK02

Tables

1A: Analytical Results with Qualifications

1B: Data Qualifier Definitions for Organic Data Review

2: Calibration Summary

CLP PO Action

Nondetected results for 1,4-dioxane in all soil samples, method blanks VBLKNS and VBLKNU, and storage blank VHBLK02 are qualified as rejected (R) due to very low relative response factors (RRFs <0.01) in the 03/27/10 initial calibration and continuing calibration verifications (CCVs) (see Comment A).

CLP PO Attention

- 1. Results for some analytes are qualified as estimated (J) due to calibration problems (see Comments D and E).
- 2. Results for some analytes in soil samples Y64N3, Y64N4, and Y64N6 are qualified as estimated (J) due low internal standard (IS) areas (see Comment F).

Sampling Issues

- 1. Soil samples Y64N3 through Y64N6 were received by the laboratory with a cooler temperature of 9.8°C which exceeds the 4±2°C sample preservation criterion. Since the cooler temperature is below 10°C, no adverse effect on data quality is expected.
- 2. The sampler signature is missing on traffic report and chain of custody records (TR/COCs) (refer to pages 9 and 10 in the data package).
- 3. The laboratory indicated in the SDG Narrative that one of the three VOA vials for equipment blank Y64M8 was received broken. The other two VOA vials were received frozen and with headspace about ¼ of an inch (refer to page 1.2 in the data package). Results for equipment blank Y64M8 may be biased low.
- 4. The laboratory indicated on sample log-in sheet that the cooler temperature indicator bottle was absent from the cooler containing equipment blanks Y64M7 and Y64M8 (refer to page 423 in the data package).
- 5. Equipment blanks were not submitted "blind" to the laboratory since the matrix was stated as "Field QC" on TR/COCs (refer to page 9 in the data package).

Additional Comments

Recoveries for DMCs chloroethane-d5 in sample Y64N3 (135%), benzene-d6 in samples Y64N3 (142%) and Y64N4 (149%), 1,2-dichloropropane-d6 in samples Y64N3 (137%) and Y64N4 (149%), toluene-d8 in samples Y64N3 (125%) and Y64N4 (138%), trans-1,3-dichloropropene-d4 in samples Y64N3 (136%) and Y64N4 (146%), and 1,2-dichlorobenzene-d4 in sample Y64N4 (134%) exceeded QC limits; associated sample results were not qualified because they were nondetects.

No sample was designated for "laboratory QC" on the traffic report and chain of custody records. The SDG Narrative indicated that the laboratory received insufficient volume to perform MS/MSD analysis for soil samples (refer to page 1.2 in the data package.)

Other than laboratory artifacts (approximate retention times of 10.8, 18.3, and 20.3 minutes), tentatively identified compounds (TICs) were not found in soil samples.

The laboratory performed manual integrations on calibrations and samples due to incorrect auto integration. Manual integrations were reviewed and found to be satisfactory and in compliance with proper integration techniques.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, Guidelines for Data Review of Contract Laboratory Program Analytical Services Volatile and Semivolatile Data Packages;
- USEPA Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration, SOM01.1, May 2005;
- Modifications Updating SOM01.1 to SOM01.2, Amended April 11, 2007; and
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

<u>Parameter</u>	Acceptable	e Comment
1. Holding Time/Preservation	Yes	
2. GC/MS Tune/GC Performance	Yes	•
3. Initial Calibration	No	A, D
4. Continuing Calibration Verification	No	A, D, E
5. Laboratory Blanks	No	\mathbf{C}
6. Field Blanks	. N/A	
7. Deuterated Monitoring Compounds	Yes	
8. Matrix Spike/Matrix Spike Duplicate	N/A	S
9. Laboratory Control Sample/Duplicate	N/A	•
10. Internal Standards	No	F
11. Compound Identification	Yes	
12. Compound Quantitation	Yes	B
13. System Performance	Yes	
14. Field Duplicate Sample Analysis	N/A	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

- A. Nondetected results for the following analyte are qualified as rejected due to very low RRFs in initial calibration and CCVs and are flagged "R" in Table 1A.
 - 1,4-Dioxane in all soil samples, method blanks VBLKNS and VBLKNU, and storage blank VHBLK02

RRFs below 0.01 were reported for 1,4-dioxane in the 03/27/10 initial calibration and CCVs (see Table 2). The DMC 1,4-dioxane-d8 also had RRF values below 0.01 in the 03/27/10 initial calibration and CCVs (see Table 2).

The RRF evaluates instrument sensitivity and is used in the quantitation of target analytes.

- B. The following results, denoted with an "L" qualifier, are estimated and flagged "J" in Table 1A.
 - All detected results below the contract required quantitation limits

Results below the contract required quantitation limits (CRQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

- C. The following result is qualified as nondetected and estimated due to method blank contamination and is flagged "U,J" in Table 1A.
 - Acetone in storage blank VHBLK01

Acetone was found in method blank VBLKJI at 2.6 ug/L. The result listed above is considered nondetected and estimated (U,J) and the quantitation limit has been raised according to the blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result and reported as nondetected. If the sample result is less than the CRQL, the result is reported as nondetected at the CRQL.

A laboratory method blank is laboratory reagent water or baked sand analyzed with all reagents, deuterated monitoring compounds, and internal standards and carried through the same sample preparation and analytical procedures as the field samples. The laboratory method blank is used to determine the level of contamination introduced by the laboratory during analysis.

- D. Results for the following analytes are qualified as estimated due to low RRFs in initial calibrations and CCVs and are flagged "J" in Table 1A.
 - Acetone, butanone, and 1,2-dibromo-3-chloropropane in equipment blanks Y61M7 and Y61M8, method blanks VBLKJI and VBLKJX, and storage blank VHBLK01
 - Methyl acetate in method blank VBLKJI and storage blank VHBLK01

RRFs were below the 0.05 validation criterion for acetone and 2-butanone in 03/25/10 and 04/05/10 initial calibrations and for acetone, butanone, and 1,2-dibromo-3-chloropropane in CCVs (see Table 2). RRFs of 0.049 for methyl acetate

SDG No.: Y64M7

Table 1A

Site: TUJUNGA Stage 2 SI

Lab: TAL Burlington

Reviewer: Santiago Lee, ESAT/LDC

Date: 05/06/10

QUALIFIED DATA

Concentration in ug/Kg (Dry Weight)

Analysis Type :

Low Level Soil Samples

for Volatiles

Station Location :	BSB-20-0	1		BSB-20-02				1		BSB-21-02			Method Bla	ank		Method Blank			
Sample ID :	Y64N3			Y64N4			Y64N5			Y64N6		,	VBLKNS			VBLKNU			
Collection Date :	3/30/2010	-		3/30/2010			3/30/2010		<u>.</u>	3/30/2010			•			\$			
Dilution Factor :	1.0	•		1.0	1.0					. 1.0			1.0			1.0		,	
Volatiles	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	
Dichlorodifluoromethane	5.8U			5.5U			5.6U			6.1U		renewanes.	. 5.0U	and an article	res conservations	5.0U	The Property later	·	
Chloromethane	5.8U			5.5U			5.6U			6.1U	all to be	و المستقد	5.0U			7 × 5.0U			
Vinyl Chloride	· 5.8U	l		5.5U			5.6U		in a common wa	· 6.1U	-	later the the state of the stat	5.0U	Training to the control of the contr	a New Arthur State of the State	5.0U	To the state of th	maken a smart a sale	
Bromomethane	5.8U	J	, E	5.5U	J	É	5.6U	1	SE.	6.1U	<u>.</u>	E	5.0U	ندلان ا	É	5.0U	J	E	
Chloroethane	5.8U			5.5U			5.6U			6.1U		and the same of the same	5.0U	dos odrados		5.0U		-court moneths	
Trichlorofluoromethane	∴ 5.8U	生产		5.5U			5.6U		6 org gg.	6.1U	ر د د کارک محمد محمد	المسافسم	5.0U	was to	ha sair da Latandarandal	* 5.0∪	id files Distriction		
1,1-Dichloroethene	5.8U			5.5U			5.6U	interioristative relation	·	6.1U			5.0U	unter semestate sem	speker or harman freedom.	5.0U		saminos de decimandos.	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.8U			5.50			5.6U		1 6 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	* 6.1U	الله الله الله الله الله الله الله الله	د مستخطین	5.00	in the second	a 25 p	5.0U	الإستادة الإستادة المستادة ال المستادة المستادة ال	and the	
Acetone	120			86			27	rs workers messer	mentenderic sedan.	59			10U	man manager	- contragged arranty stops as	10U	anti-redefineration	kerke to the by September	
Carbon Disulfide	5.8U		86.77	5.5U.			5.6U			6.1U		و ادراید شاریختید	5.0U	المن المرازي فالمخطفات	ه ۱۳۵۳ م مالاندها	. 5.0U			
Methyl Acetate	5.8U		· arvoname	5.5U	Sedenkeketekekeke	Trans-total all villages	5.6U	*************	MATA CARDON MATA	6.1U.	Augusty Americans	· ·	5.0U		- mangani amangani antan	5.0U	attention of the control of	rsintintar Tetavler (r.)	
Methylene Chloride	5.8U	and the second		5.5U		\$ 10.15 4 4 4 4	5.6U			5.1U			5.0U	1 % V	The state of the same	5.0U			
trans-1,2-Dichloroethene	5.8U			5.5U			5.6U	- Carabado de Labora dales	nded new decire teater	6.1U			5.0U	tony tonney (gray)		5.0U	Emiliate spectation being	der Frederick der der Sterfende aller	
Methyl tert-Butyl Ether	5.8U			5.5∪			5.6U	ATA A		े. 6.1U.	Y Y		5.0U	ACTION C	هر او	5.0U			
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cis-1,2-Dichloroethene	5.8U			5.5U			5.6U			6.1U	allo (1, A) deletical	المراجعة ا المراجعة المراجعة ال	5.0U		الملحك	5.0U			
2-Butanone	41		ata tanan ana a	30	Lottes skoteni skoteni		9.6L	J	В	19	Charles a Confession Confession	sympotomorp society	10U	ned extended extens	Anten et atach con	10U	natura no de contrate de la contrate	and the second	
Bromochloromethane	5.8U			5.5U			5:6U			, 6.1U.	Carlotte	San San	5.0U	منافليلا	4 5 1	5.0U			
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1,1,1,Trichloroethane	5.8U	5		5.5U			5.6U			6.1U	T.A.I.		5.0U		1.00	5.0U			
Cyclohexane	5.8U			5.5U	leri edualer i Mis el eli	and of sales and and and and and	5.6U	T-the More Mark Colon	- CONTRACTOR CONTRACTOR	6.1U	rior hashed by the first hotel.	المجامعة المراجعة	5.0U	m thatledecketholicity	S-Service Services	5.0U	. Critical characterist	ahondidetiko Jedi	
Carbon Tetrachloride	5.8U			5.5U			5.6U			⊸⊮, 6.1U _r	III.				1	- 5.0U			
Benzene	5.8U			5.5U	Allegania (Index/	· Constitutional man	5.6U	CONTRACTOR CONTRACTOR	***************************************	6.1U	ornament abrownster.	agripa de en la colonia pina de la colonia	5.0U	Anthophysia piggikujúrani	Proposition of the Control	5.0U	SieSentessweitzenhalte.	AUSCHURTSCHURTE	
1;2-Dichloroethane	5.8∪			5.5U			5.6Ü.			6.1U		2000	, 5.0U.			5.0U			
1,4-Dioxane	120U	R	A	110U	R	A	1100	R	A	120U	R	A	100U	R	A	100U	R	A VERSAGO CASCAGO AND A	
Trichloroethene	5.8U			5.5U			5.60	150/151		6.1U		14.14.16	5.0U			, 5.0U			

SDG No.: Y64M7

. Table 1A

Site: TUJUNGA Stage 2 SI

Lab: TAL Burlington

Reviewer: Santiago Lee, ESAT/LDC

Date: 05/06/10

QUALIFIED DATA
Concentration in ug/Kg (Dry Weight)

Analysis Type :

Low Level Soil Samples

for Volatiles

Station Location :	: BSB-20-01 BSB-20-02			•	BSB-21-0	1		BSB-21-0	2	•	Method Bla	ank		Method Blank				
Sample ID:	Y64N3			Y64N4			Y64N5	-		Y64N6		-	VBLKNS			VBLKNU	•	
Collection Date :	3/30/2010	. *		3/30/2010			3/30/2010	-		3/30/2010								
Dilution Factor :	1.0			1.0∙			1.0			1.0			1.0			1.0	`	
Volatiles	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Methylcyclohexane	5.8U			5.5U		,	5.6U			6.1U			5.0U	,		5.0U		
1,2-Dichloropropane	5.8U			5.5U			5.6U			6.1U		100	5.0U			5.0U		
Bromodichloromethane	5.8U			5.5U			5.6U			6.1U			5.0U			5.0U		
cis-1,3-Dichloropropene	5.8U			5.5U			√5.6U			6.1U			⊬. ∱.5.0U		7.	5.0U		
4-Methyl-2-Pentanone	12U			11U	·		11U			12U			10U			10U		
Toluene	5.8U			5.5U			5.6U			6.1U			5.0U			·5.0U	ne la ned a ne.	
trans-1,3-Dichloropropene	5.8U			5.5U			5.6U			6.1U			5.0U		l	5.0U		
1,1,2-Trichloroethane	5.8U	-		5.5U			5.6Ú			. 6.1U			,∵ ∕ 5.0U	8 8	Y	5.0U	annes .	4.
Tetrachloroethene	5.8U			5.5U			5.6U			6.1U			5.0U			5.0U		
2-Hexanone	12U	7		11U			110			12U			10U			10U		
Dibromochloromethane	5.8U			5.5U			5.6U			6.1U			5.0U			5.0U		
1,2-Dibromoethane	5.8U			5.5U			5.6U			6.1U			5.0U			5.0U		
Chlorobenzene	5.8U			5.5U			5.6U			6.1U			5.0U			`5.0U		
Ethylbenzene	5.8U			5.5U			5.6U			6:10		A Section	5.0U			5.0U		
o-Xylene	5.8U			5.5U			5.6U			6.1U			5.0U			5.0U		
m,p-Xylene	5.8Ŭ			5.5U			5.6U			6.1U			5.0U			5.0U		
Styrene	5.8U			5.5U			5.6U			· 6.1U			5.0U			5.0U		
Bromoform	5.8U	J	F	5.5U	Ĵ	F	5.6U	various (F		6.1U	J	F.	5.0U			5.0U		
sopropylbenzene	5.8U			5.5U			5.6U			6.1U			5.0U			5.0U		
1,1,2,2-Tetrachloroethane	5.8U			5.5U			5.6U	A. P. SA.	47.27	6.1U			5.0U			5.0U		
1,3-Dichlorobenzene	5.8U	J	F	5.5U	J	F	5.6U	A ALPERTATE TO		6.1U	J	F	5.0U			5.0U		
1,4-Dichlorobenzene	5.8U	Ĵ	F	5.5U	J	F	5.6U	AT STORY		6.1U	Ĵ	F	5.0U			5.0∪		
1,2-Dichlorobenzene	5.8U	J	F	5.5U	J	F	5.6U	on white the Arthqueton	anton hapting largers are less	6.1U	J	F	5.0U	Carting Torquipment		5.0U		
1,2-Dibromo-3-chloropropane	5.8U	Ĵ	F	5.5U	J	F	5.6U			6.1U	, Ú.	j.F	5.0U			5.0U		
1,2,4-Trichlorobenzene	5.8U	J	F	5.5U	J	F	5.6U			6.1U	J	F	5.0U			5.0U		L
1,2,3-Trichlorobenzene	5.8U	J.	F	5.5U	J	F	5.6U			6.1U	J	F	5.0U			5.0U		
Percent Solids	82%			79%			81%			79%			NA			. NA		

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation Limit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS

Case No.: 39591

SDG No.: Y64M7

Table 1A

Site: TUJUNGA Stage 2 SI

Lab: TAL Burlington

Date: 05/06/10

Reviewer: Santiago Lee, ESAT/LDC

QUALIFIED DATA

Concentration in ug/Kg (Dry Weight)

Analysis Type :

Low Level Soil Samples

for Volatiles

Obstant control	Chauses Di	- 					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ξ <u>ε.</u>	 		٠, ١	-			i i		
Station Location:	Storage Bla	ank		ODO!		36		L 3,2	2 10			:			s' .			
Sample ID :	VHBLK02			CRQL														,
Collection Date :															•	, , ,		
Dilution Factor :	1.0			DIA			Dooule	Val	Com	Result	Val	Com	Result	Val	I Com	Result	Val	Com
	Result	Val	Com	Result	Val.	Com	Result	vai	Com	nesuit	vai	Com	nesuit	Vai	Com	nesuit	Vai	ÇOIII
Dichlorodifluoromethane	5.0U	55554535555	SSENERAL AGES	/ 5.0		1220120100		10 TABLE 19	363366		38.000234						9-12-13	
Chloromethane	5.0U			5.0		4 2 2 2 3 3		No.	3. s. d. 34. 3.			Part some						
Vinyl Chloride	5.0U	·	egeroneodesid	5.0		2002000000		SOME STATE	SEESKALK	****		2004 W 11 No.		1542558	100000000000000000000000000000000000000			
Bromomethane	5.0U	J	E	5.0							1000000							A SECTION
Chloroethane	5.0U	and representation of the control of		5.0		Services		r agenetation series	ne manieka je	10.000 A. 10.000				45.0560	and Market			CONTRACTOR
Trichlorofluoromethane	5.0U	100		5.0	8					and the second								
1,1-Dichloroethene	5.0U	127-17027-1707-1800808	natohoko winikisint	5.0	anistationen sis	100 A FRENC STATISTIC	en e		MESSAME SESSOR		3×9:868338		n der see een der				7.86206000	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0U	55		5.0											2			
Acetone	10U	14114/18/88/C/10, 0186	aro-articosististi	10	in a company and a company	25 CARREST CONTRACTOR	ng manunannak naki	SOURCE AND	THE SERVICE HARVE	Statistical Material States	\$6600T980	15,4040, 1405, 1705		NAC SPECIOS SE	SALESTABLES	ne regarings and	NACA SECRE	
Carbon Disulfide	5.0U			5.0				2.0						0.30				
Methyl Acetate	5.0U		hatin a strategy and selection	5.0	MATHEMATICAL PATE	S (Ballion S) (Ballion S) (S)	hat intertwining intertwining for Twite	Carrier Carrier Strategy	Addisonal Brains	BURNES FARBOT PARTOCOCCUS (S	- Automorphism (Taetichetischmististe	Halas describings sign	\$80.55.0\$25.0\$9\$\$: Homeomines	19000000000000000	ige-man-mas	
Methylene Chloride	5.0∪			5.0												4	5 F L . K Z	
trans-1,2-Dichloroethene	5.0U		similar or manufactural methods with	5.0	SPORTSWIFT SHOWS OF	ISSUES SANSTAN	and the second s	ent desalentations	***********	nouscated interpretational and the	e a would national technique	195 Interest colonication	conditional states and states and	Roberts (berlet)	v Province accesses	NO. 47 TO 24 TO 25 TO 25 TO 75 TO 15	SERVICES OF CHEST	teacossoci
Methyl tert-Butyl Ether	5.0∪			5.0														
1,1-Dichloroethane	5.0U			5.0	The second secon	ske kerkenhere skrivenske		0.0803.0800797800	SARATA SARATA (CARA	crearing agreement responsible and reference	constraint of charles	SMINTERSON	ent of the characteristic content of the	ADDITION AND A	e management control	neconstante an auce	15858561966	reseasor re
cis-1,2-Dichloroethene	5.0∪			5.0								3,3,6,4,					2.5	
2-Butanone	′~ 10U`			. 10		-		. Service de la constante de l		Transport and a contract and a contr	, notestable and objects	- Selektirkelekele		- Anthropet Control		e manharitectus est montrological de sinci	Nutra i materiamen	morphus deplotes
Bromochloromethane	5.0U			5.0										5303342			2.5	
Chloroform	5.0U			5.0				1	man in a real arrange		n beloning reported	:	a fish cholymono hadamatatain la	i w ketia ko kofuelkolik	of admittable Private We	. NESONO CERCUSOROS ESCAPORES	Andreas dispersional refer	; ~
1,1,1-Trichloroethane	5.0U			5.0														
Cyclohexane	5.0U	30.000000000000000000000000000000000000	Car College College	5.0				I						man a real table of the real		more advances on the control of the		S. PATHO PASTON
Carbon Tetrachloride	5.0∪			5.0						. 75							i ti	
Benzene	5.0U	THE PARTY OF THE PARTY	- #10 cittal actor (1997)	5.0			1							had minimized my	To destablished to the second		No Continuos Continuos con	***************************************
1,2-Dichloroethane	5.0U			5.0								200			and the second			
1,4-Dioxane	100U	R	Α	100	Jan Jerske plansourge, 1946)		Section and section and section in	,				L				alakarianiarkarkarianiarka		e estendente esta esta esta esta esta esta esta es
Trichloroethene	5.00			5.0														

SDG No.: Y64M7

Table 1A

Site: TUJUNGA Stage 2 SI

Lab : TAL Burlington

Reviewer: Santiago Lee, ESAT/LDC

Date: 05/06/10

QUALIFIED DATA
Concentration in ug/Kg (Dry Weight)

Analysis Type:

Low Level Soil Samples

for Volatiles

Station Location:	Storage Bl	ank			mak ay madaada ta'a y mama			THE MAN TO SHAPE TO SHAPE THE PARTY OF THE P						or Address have and 150, and 150		,	11.000 10.00 10.00 10.00	a Commence of the Commence of
Sample ID :	VHBLK02		'	CRQL										,				
Collection Date :																		
Dilution Factor :	1.0				`	-			-		•							
Volatiles	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Methylcyclohexane	5.0U			5.0							ar ann a tambéan an an ann	The section of the se						
1,2-Dichloropropane	5.0U			5.0														
Bromodichloromethane	5.0U			5.0														
cis-1,3-Dichloropropene	5.0∪			5.0														
4-Methyl-2-Pentanone	. 10U			10		National Bridge Con-	all relatives retain 11 we appear to the second second	12/12/07/12/12/07/12		THE RESIDENCE OF THE PROPERTY	and approximate of					rtint outlier to the beauty of the		
Toluene	5.0U			5.0														
trans-1,3-Dichloropropene	5.0U		annima.	5.0			· management and a section of the contract of		Continuo regio Continuo con Con		On Dodd industrial whether	- 	Section Control of the Control of th					
1,1,2-Trichloroethane	5.0U			5.0					100					a 1.50,				
Tetrachloroethene	5.0U		n-seconomerco	5.0	1518-1518-1518-1518-1518	som a consumber	Maria i alkelikowi alleria ileka i akaini	National States	Supple the Control of Supple	rSuSub-Aastr Strawsousus (Susan	- Jagoth Geth Guile	and the first of the second	principal descriptions and the factor in the second for	vo mentinente	arb manadane versar	enancement are entered to the entered to	Pathodia Jadhe Sedickler	
2-Hexanone	10U			10														
Dibromochloromethane	5.0U	LONG OF THE PARTY OF THE PARTY.	140-00-00-00-00-00-00-00-00-00-00-00-00-0	5.0	- and state the state of	rec. contrations and		Carterior Scotter (LETING)		Contacts, whether to the San San State (San San San San San San San San San San		FARRA ROBERTO SARE	Sationio interiorio in interiorio del constanti del consta	man shallan shiman	circlesius sectoricales	#articles/uplanessatischenes/uplanes/uplanes	(D)(B)(J)(D)(C)(Ab)(A)	NAMES OF STREET
1,2-Dibromoethane	5.00			5.0														
Chlorobenzene	5.0U			5.0	sile Strate Control of the Control	CONTRACTOR AND	chaholohatetetatakaknish deta	-shall-shallarisate that	estation hadestonist	Jirakokokokokokokokokok	alicatoricatorilaticalicator	i of other limited paints at	Todaha koređenjah oir hekologi	Sububahah di Astronia	habakakakahabakah.	From the free book of the control of	Constructive description description	
Ethylbenzene	5.0U			5.0								966666						4741
o-Xylene	5.0U	van de mercenbeleri	descriptions of the second	5.0	na contratora de la con	Desire Coethy To Chertie For	strangia/station transplantations	Salka Sa	11-1505-25-15-15-25-25	NeSchelleskelsekelselselselselselselse	makanakakakaka	-mandaes-serie	al efect se les entre les al elles conerée	eter helhelhelhelhelhe	alkalieri-zinal-ethalisch		minto mortuniana micro	
m,p-Xylene	5.0U			5.0														
Styrene	5.0U	- shador restachedostat	et ekekztekoù hai	5.0	calculations designed	Internal Walkington		nethern annubers eins her.	TORCOUS VALUE OF OR	150000000000000000000000000000000000000	Paul Challed and Shell and	NEWSKERSKAFNER	tratt on those commensures or	Suffer Dellar Dellar Dellar State	NATIONAL WAY THE MAY		SEASONMENT OF THE	r fetherer sawcorns
Bromoform	5.0U			5.0														
sopropylbenzene	5.0U	mayarayayayaha	termelyalatival visits	5.0	sielis/arielis/arielis	Sectorial Control		Langua anternan	I THE I THE STREET WHEN		TO SOURCE SOURCES	motiva servicio		allant states at the	5/0760#6#6960#6#60*0	interfact the later half of the later half of the later	Solidists beliefulter	n and a francisco
1,1,2,2-Tetrachloroethane	5.0U			5.0				2.75.31										
1,3-Dichlorobenzene	5.0U		PTO A STATE SHADOW	5.0	hat seekel value het albe	Selection wherein	TO SEE SEE SEE SEE SEE SEE	D REPORT HIS HOUSE	THE THE SELECTION OF SE		nome and a	Data: Corpor: Di	S. COLORIDA DE COSTO DE LA COST	Methodolesia sater	damin's remines seen	detakan detakan kendaran	doctorior den den	- INDIVISION SAVORI
1,4-Dichlorobenzene	5.00			5.0														Section 2
1,2-Dichlorobenzene	5.0U	zinieroninieronia	Salandaria (al-1969)	5.0	· Selection of the sele	special designation is		NORTH SERVICE	egesterfreigheit in he		10340754(42)27454	essalatikos alkohores		-	ent upplatelylycate			z Naškije Sva la Proko
1,2-Dibromo-3-chloropropane	5.0U			5.0						3								
1,2,4-Trichlorobenzene	5.0U	influence control of the	statival abalication in	5.0	da Popular de porte de		antama dalah d	Medical photos	School and applicate	instrational and participated or instrated	zásárajadyzág kelvő	Actualistic orbitalis	didameta di capo nistino	- 東京国内 - 25100-4	States are		- des asserbiter tertas	s approprieses
1,2,3-Trichlorobenzene	5.0U			5.0													1927	

Percent Solids

NA

NΑ

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation LImit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS

Case No.: 39591

SDG No.: Y64M7

Table 1A

Site: TUJUNGA Stage 2 SI

Lab : TAL Burlington

Reviewer: Santiago Lee, ESAT/LDC

Date: 05/06/10

QUALIFIED DATA
Concentration in ug/L

Analysis Type:

Trace Level Water Samples

for Trace Volatiles

Station Location:	BSB-19-3	. ,		BSB-19-4		, i	Method Bla	ank 🚛	- in	Method Bla	anķ	٠	Storage Bl	ank		,	•	
Sample ID :	Y64M7		EB	Y64M8	, ,	ËΒ	VBLKJI	•	. "	VBLKJX	`		VHBLK01			CRQL		
Collection Date :	3/26/2010`			3/26/2010								•	:			, -		ľ
Dilution Factor :	1.0			₫.0			1.0			1.0 ±	,		1.0		•		•	
Trace Volatiles	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.50U	Chilly de the Declaration	NEWFORLA SORRIGION	0.50U	destination in the destination	hatkolidasidinilese	0.50U	Supples of the co	Sea th Applicatively	0.50U	(Mark Challes Card)	Sec. of charge from the	0.50U	Section in Continues on the	CABERCABERCAR	0.50	200000000000000000000000000000000000000	
Chloromethane	0.50U			0.50U			0.50U			0.50U	ar in Sec.		0.50U		9 9 9	0.50		
Vinyl Chloride	0.50U		discontradiction of	0.50U	and the second	-electrocontent and	0.50U	e es esta consecuentes	ona na ana ana	0.50U	introduction states	i meteranicanies	0.50U _{>}	06/46/6/46	Strangensere	0.50	Association	and the second
Bromomethane	0.50U			0.50U			0.50U			0.50U			0.50U		1 4 5 1 6 5 A	0.50		
Chloroethane	0.50U	NORTH NORTH PROPERTY.	Australia Resolutio Strata	0.50U	service colors	K: 542/98/98/09/09	0.50U	etroiscon/services/ct	district specialist	0.50U	1 Statististististististist	rizere repositer	, 0.50U	eletskeletstate:	maintenante	0.50		- AMERICAN CHORESINE
Trichlorofluoromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50	200	
1,1-Dichloroethene	0.50U	-meneraparenda	erhad effertier (erflanke)	0.50U	1	NO CONTROL OF STREET	0.50U	hatertan da santa	· interpretation on	0.50U	BELLEVIS CROSSES	LONGER CONTRACTOR	0.50U	Segment of the control of the	SUBSECTION OF THE PROPERTY OF	0.50	219600000000	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
Acetone	6.3	J	D	5.3	J .	D SISSIBARING	2.6L	J Herrisalantan	BD	5.0U	· J	. D	5.0U	, j	CD	5.0	tenesaloskys-so	In terms of the state of the
Carbon Disulfide	0.50U			0.50U		35.2 11	0.50U			-0:50U			0.50⊎			0.50		
Methyl Acetate	0.50U	hart rahasi arisonesi artiso	September delicite	0.50U	NORONIE O SOLI	200 000 000 000 000 000 000 000 000 000	0.50U	J Andress and	D	0.50U	1 0000 0000 0000 0000 0000 0000 0000 0	Cal tradesported	0.50U	J	D	0.50	eletetetetetetet	elateratidatetet
Methylene Chloride	0.50U			0.50U			0.50U			0.50U	4 (2)		0.50U			0.50		
trans-1,2-Dichloroethene	0.50U	in areaniastistis	chalatetetetetet	0.50U	av drene drene drene	9510P5109000140B	0.50U	::totoskribalizikelet	States at the same	0.50U		KARISTON WA	0.50U	aradas en das esc	rankadawan	0.50	SR ANDENIANS.	tan titar enar
Methyl tert-Butyl Ether	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
1,1-Dichloroethane	0.50U	Cuthor selections	to the state of the	0.50U	হার প্রকাশকাক কাবে		0.50U	Gr. herrefulberheiselb	F-SAGNIFAR-ANNAN	0.50U	0.000	ARIESZIKSFI	0.50U	500000000000	aestaestae.	0.50	**************************************	97.98-44#57544-678
cis-1,2-Dichloroethene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		412.3
2-Butanone	2.8L	J	BD	2.6L	J ·	BD	1.2L	J	BD.	5.0U	J.	D Secretarion	5.0U	· J	D	5.0	TOTAL SERVE	Schleidelski stati
Bromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
Chloroform	0.50U	Cartholia Cartho	pusessimmental	0.50U	Simple consistence	Macadapholidesh o	0.50U	2012-2012-2013		0.50U	1905/5888898	PRINTERSON	0.50U			0.50	20 M21M251	
1,1,1-Trichloroethane	0.50U			0.50∪			0.50U			0.50U			0.50U			0.50	No.	45
Cyclohexane	0.50U	Literania de la composición dela composición de la composición de la composición de la composición dela composición dela composición dela composición de la composición de la composición dela composición de la composición dela composició	need special control	0.50U	W. California		0.50U	atternative forester	anasironan	0.50U	500000000		0.50U	astro serem	0.000.0000	0.50		Selected at least of
Carbon Tetrachloride	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
Benzene	0.50U	800,000,600,407	stuagest customic	0.50U	15198 F1551954 1988	Talkar Kindalis cond	0.50U	40 Sporther curtor	STANDARD STANDARD ACTION	0.50U	10000000000000		0.50U	17505000000	2/2005/2014/2	0.50	SOUTH OF THE	
1,2-Dichloroethane	0.50U			0.50U			0.50ป			0.50U			0:50Ü	4.5		0.50		
Trichloroethene	0.50U	Commence Services on	Folk volycopological Parison	0.50U	Terrapoletani, Auto		0.50ป	el stransfer velocity	Selegativativitatis	0.50U	a managemen		0.50U	\$1500 P.	1000000000000	0.50	33023937	RECORD PROPERTY
Methylcyclohexane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50	32.4	

SDG No.: Y64M7

Table 1A

Site: TUJUNGA Stage 2 SI

Lab: TAL Burlington

Reviewer: Santiago Lee, ESAT/LDC

Date: 05/06/10

QUALIFIED DATA
Concentration in ug/L

Analysis Type:

Trace Level Water Samples

for Trace Volatiles

		The second record	and a successful of the succes					OR OTHER PROPERTY.	non-security property contra	AND A STATE OF THE		material attachments.	or the same and the constant Wilson are			THE RESERVE ASSESSMENT OF THE PARTY OF THE P		UT AND ALBERTA
Station Location:	BSB-19-3		-	BSB-19-4		```,	Method Bla	ank		Method Bla	ank		Storage Bl	ank				
Sample ID :	Y64M7			.Y64M8			VBLKJI		• •	VBLKJX			VHBLK01			CRQL		
Collection Date :	3/26/2010			3/26/2010				•	:	-	1.6							
Dilution Factor.:	1.0			1.0			1.0			1.0	. 33 - 200 - 400 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1.0					
Trace Volatiles	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
1,2-Dichloropropane	0.50U			0.50U			0.50U			0.50∪	ner malendaren	Mic Nad Michael Area	0.50U			0.50		ananan mananan
Bromodichloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
cis-1,3-Dichloropropene	0.50U			0.50U			0.50U	o escalatorio de cisas	and a strategy of the strategy	0.50U	to constructive tradeglarity	Nove to the herberheim	0.50U	Outlings Shiftway Shifts	2000	0.50	inconeracións	at all other free and other
4-Methyl-2-Pentanone	5.00			5.0U			5.0U			5.0U			5.0U			5.0		
Toluene	0.50U			0.50U			0.50U	a series and a series as	Mary communication of related	0.50U	with a state of a state of	eduction of what	0.50U	activity of the land of the control	with the sign of the first of the first	0.50		nacional con contractival
trans-1,3-Dichloropropene	0.50U			0.50U			0.50⊍			0.50U			0.50Ŭ			0.50		
1,1,2-Trichloroethane	. 0.50U			0.50U			· 0.50U			0.50U			0.50U			0.50		
Tetrachloroethene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
2-Hexanone	5.0U			5.0U			5.0U			5.0U			5.0U			5.0 .		
Dibromochloromethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
1,2-Dibromoethane	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
Chlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
Ethylbenzene	0.50U	, , , , , , , , , , , , , , , , , , ,		0.50U			0.50U		ar Carris Albandardon Barislani	0.50U		instrudencins desder the score	0.50U	Conditional materials and considerates	teritorio de significación de	0.50		
o-Xylene	0.50U			0.50U	rate at a second		0.50U			0.50U			0.50U			0.50		
m,p-Xylene	0.50U			0.50U			0.50U		No and in the later	0.50U		ethnik norther missions	0.50U	ordeni ordeniana sustanti		0.50	-	
Styrene	0.50U			0.50U			0.50U			0.50U			0.50U			-0.50		
Bromoform	0.50U			0.50U			0.50U		STATE	0.50U		Ordered red red red red	0.50U	the control of the other	A mile of manifest free land	0.50		an menunununununun
Isopropylbenzene	0.50U			0.50U			0.50∪			0.50U			0.50U			0.50		
1,1,2,2-Tetrachloroethane	0.50U			0.50U			0.50U			0.50U	and and the state of the state of	alis Sant mistra di mism	0.50U		and an and enterthine to the	0.50		name di anto nome mon
1,3-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50Ü			0.50		
1,4-Dichlorobenzene	0.50U			0.50U			0.50U			0.50U	There's arter thank and or her the		0.50U			0.50		
1,2-Dichlorobenzene	0.50U			0.50U			0:50U			0.50U			0.50U			0:50		
1,2-Dibromo-3-chloropropane	0.50U	J	D	0.50U	J	D	0.50U	J	D	0.50U	J	D	0.50U	J	D	0.50	The same description of the same of the sa	is virtually above
1,2,4-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U			0.50U			0.50		
1,2,3-Trichlorobenzene	0.50U			0.50U			0.50U			0.50U		athering which we write	0.50U	activities of the first of		- 0.50	Mark plants to pro-	of Constant
Name and the contract of the c			William Co. Co. Co.	The Court of the C	ATT Decrease and the second			-		1								- Addition of the last of the

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

CRQL - Contract Required Quantitation Llmit

N/A - Not Applicable

NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008.

- U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Table 2 Calibration Summary

Case No.: 39591
SDG No.: Y61M7
Site: Tujunga SI
Laboratory: TestAmerica Burlington
Reviewer: Santiago Lee, ESAT/LDC
Date: May 4, 2010

RELATIVE RESPONSE FACTORS (RRFs)

Analysis date: Analysis time: GC/MS I.D.: Analyte 1,4-Dioxane 1,4-Dioxane-d8	RRF 03/27/10 13:15- Ni <u>Initial</u> 0.003 0.003	RRF 04/01/10 08:48 Ni CCV 0.003 0.003	RRF 04/01/10 17:18 Ni CCV 0.003 0.003	RRF 04/05/10 11:28 Ni CCV 0.003 0.003	RRF 04/05/10 17:44 Ni CCV 0.003 0.003
Analysis date:	RRF 03/25/10 19:46-	RRF 03/29/10 10:17	RRF 03/29/10 19:15		
Analysis time: GC/MS I.D.:	19.40- Ji	Ji	19.13 Ji	,	
Analyte	<u>Initial</u>	CCV	CCV		
Acetone	0.023	0.022	`0.023	•	
2-Butanone	0.042	0.042	0.042		
1,2-Dibromo-3-chloropropane			0.043		. 1
2-Butanone-d5	0.042	0.043	0.047		•
2-Hexanone-d5	0.041	0.042	0,040	•	
			222		
•	RRF	RRF	RRF		•
Analysis date:	04/05/10	04/06/10	04/06/10		
Analysis time:	13:18-	08:11	09:53		
GC/MS I.D.:	Ji	Ji	Ji		
<u>Analyte</u>	<u>Initial</u>	<u>CCV</u>	CCV	•	
Acetone	0.014	0.012	0.012	•	
2-Butanone	0.028	0.024	0.026	÷	
1,2-Dibromo-3-chloropropane		0.040	0.039		·
2-Butanone-d5	0.027	0.024	0.025		
2-Hexanone-d5	0.033	0.029	0.030		